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Southern Pines: Better Profits for Marginal Lands

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SOUTHERN PINES: Better Profits for Marginal Lands

Do you have land that is not giving you a good rate of return? Southern pines may be a solution to your problem. The U.S. Department of Agriculture has identified 17 million acres of "marginal" cropland and pastureland in the South that could produce greater net income if converted to pine production.

What Is Marginal Land?

"Marginal land" is land which:

- returns only your crop production costs (or less), or
- gives you lower returns than you could get by using it for some other purpose.

Marginal land usually has problems such as:

- low productivity,
- severe erosion,
- droughty soil,
- steep or rolling slopes,
- poor drainage, and
- poor markets for crops.

Most of the 17 million acres identified as marginal in the USDA study have been classified by the Soil Conservation Service as 2e, 3e, 4e, 6, and 7 — soils which have an erosion hazard and are susceptible to severe erosion. If you want to know whether some of your land might be marginal, contact your Cooperative Extension Service agent or the local office of the USDA's Soil Conservation Service. They can help you decide.

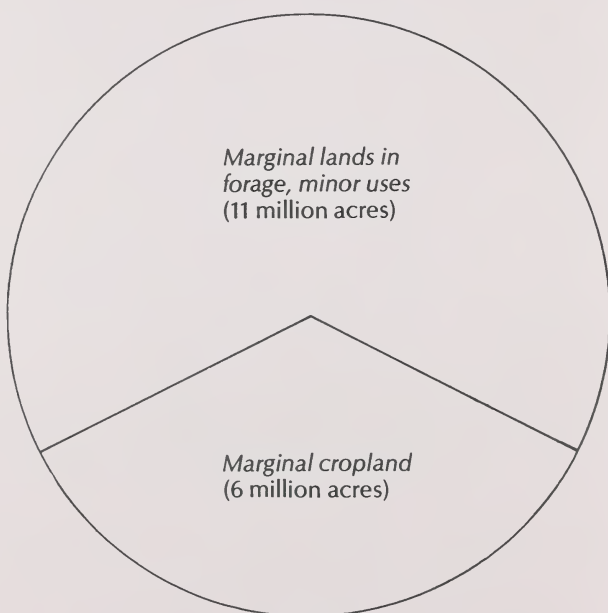


Figure 1. — Identified marginal lands in the South

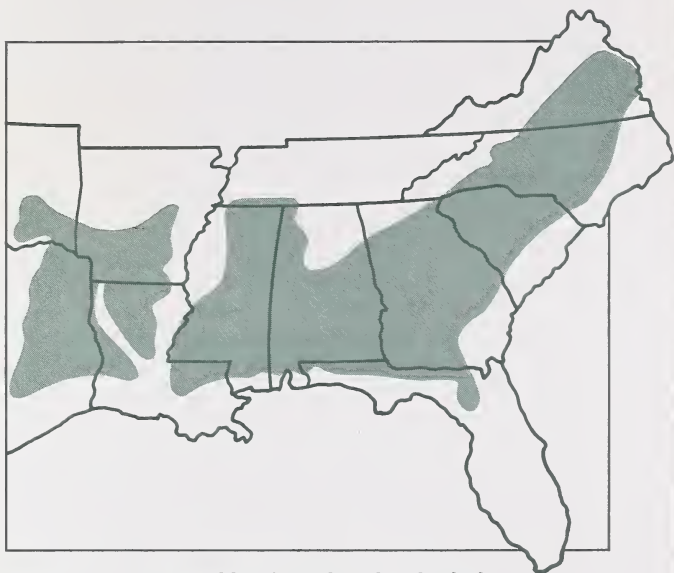


Figure 2. — Marginal lands within the shaded area are potential pine growing areas

Where Are These Marginal Lands?

If your land is in the part of the South shown in figure 2, it is in the area included in USDA's southern pine study. Oklahoma and Virginia have similar marginal lands. The best pine tree crop sites lie within the growing range of the three major southern pine species — loblolly, slash, and longleaf. Kentucky and Tennessee are outside the range of these species.

Much highly productive, income-producing farmland is in this area. It is only the marginal, low-producing land that you should consider converting to pine. Lands with high erosion hazards are particularly appropriate for pine plantations.

You should plant at least 10 acres in pines to operate on a commercial scale. Larger acreages are better because stumpage prices are usually higher.

What Are the Benefits of Planting Pines?

The future for growing pine trees looks bright. Over the life of a plantation, you can expect your direct investments in tree planting and care to return 10 to 12 percent beyond the rate of inflation.

Timber growth should average 140 cubic feet ($1\frac{3}{4}$ cords) of solid wood per acre per year. Some areas may produce even higher yields. If you planted 600 trees per acre, an average site would produce 31 to 40 cords of pulpwood per acre in 20 years, under average soil and moisture conditions (table 1).

Table 1. — Guide to estimating 20-year pulpwood yields in loblolly pine on forest sites

Site	Land quality	Yield
<i>Description</i>	<i>Site index (age 25)*</i>	<i>Cords/acre</i>
Poor	45-50	15-24
Fair	50-55	24-31
Average	55-60	31-40
Good	60-70	40-60
Very good	70+ above	60+ above

*Average height of tallest trees at age 25.

Most sites can produce an average annualized net return to land and management of \$15 to \$50 or more per acre, excluding inflation. The net return depends on tree yields, costs, and price increases. If you grew crops and forage on these marginal lands instead, net returns would be less and on many acres you could have annual net losses as high as \$30 or more per acre.

Pine plantations can produce their first income when they are ready for thinning. This may be as early as 12 years after planting on good sites, 15 to 17 years on average sites. In addition, thinning increases the growth of the remaining better quality trees.

You may be able to double your profits by letting the trees grow beyond the size of pulpwood into sawtimber or other higher value products which increase rapidly after pine plantations pass 25 years of age.

Planting trees on marginal land yields other benefits too. You can reduce soil erosion, improve water quality and game habitats, and make the land attractive for recreation. If you continue to farm seriously eroding lands, they are likely to become less and less productive.

You may qualify for federal or state cost-share assistance when you plant pines. Your own labor and the cost of existing equipment for planting can be counted as your matching shares. In addition, federal tax incentives are available to offset direct costs. You can claim a tax credit equal to 10 percent of the initial planting cost. The total planting cost can be deducted over a 7-year period.

Will There Be Markets?

Markets for pine timber are widespread throughout the area. These markets are expected to grow in response to population increases and economic growth. Use of southern pine timber for pulpwood, lumber, and plywood is expected to increase by 60 percent in the next 30 years. It will almost double by 2030. Because it appears that demand will exceed supply, prices are likely to continue to increase at rates greater than the rate of inflation. Current prices are in table 2.

Table 2. — Average pine stumpage prices, by state, January 1984

State	Price per MBF ¹ sawtimber	Price per cord ² pulpwood
Alabama	\$171.00	\$19.00
Arkansas	150.00	17.00
Florida	193.00	27.50
Georgia	196.00	24.50
Louisiana	166.00	15.75
Mississippi	145.00	13.00
North Carolina	165.00	10.75
Oklahoma	113.00	14.00
South Carolina	180.00	18.00
Texas	155.00	16.50
Virginia	135.00	10.50
Average	160.80	16.95

¹Per 1,000 board feet (Scribner scale) (227.7 cubic feet per 1,000 bd. ft.)

²Cord = 128 cubic feet (4 x 4 x 8 feet)

Source: *Timber Mart South*, January 1984.

Table 3. — Ranking of market value of timber crops (sawlogs and pulpwood) in comparison to agricultural crops,* by state, 1981

(market value in millions)

Timber is Number 1 Crop in:	Timber is Number 2 Crop in:	Timber is Number (3-6) Crop in:
Mississippi (\$467)	Louisiana (\$384)	Arkansas (No. 3) (\$400)
Alabama (\$449)	North Carolina (\$376)	Texas (No. 6) (\$365)
Georgia (\$448)		Florida (No. 5) (\$247)
South Carolina (\$353)		Virginia (No. 4) (\$141)
		Oklahoma (No. 3) (\$128)

*Soybeans, wheat, corn, cotton.

Source: Bennett B. Forest, USDA Forest Service

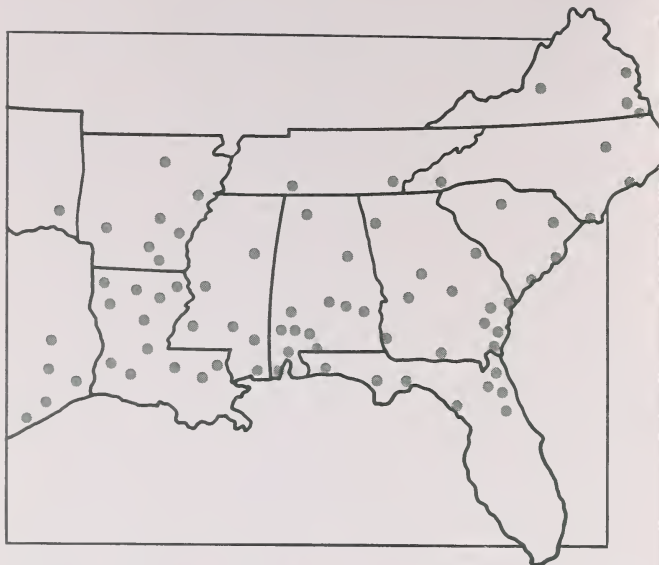


Figure 3. — Location of pulp and paper mills, 1981

Recent growth in pulp mill capacity shows an increasing demand for pine timber. The South added 22 new mills between 1964 and 1981. Mill use of wood almost doubled in that period. In 1984, 116 pulp and paper mills were in business in the 13 southern states. Throughout the South, new plants are being built and existing plants are being expanded. Sawmills, plywood plants, flakeboard plants, and other wood-using industries are growing too. Figure 3 shows the location of pulp and paper mills in the South.

Timber ranks among the six top crops in market value received by farmers and other landowners in each of the 11 southern states. In several states, timber crops rank first or second in value. See table 3.

Where Can You Get Help?

If you want to explore the idea of using some of your land to grow southern pine, you can get information and help from many local sources.

- *The Cooperative Extension Service* has county agents who can answer your questions on forestry, and you can get information from Extension Service publications, meetings, workshops, and field days. Extension agents can also refer you to other sources — public forestry agencies, industry, or private consultants. Look for Extension in the “county government” section of your telephone directory.

● *State forestry agencies* employ professional foresters to serve forest owners. They can give you technical advice on forest management and provide you with sources for buying tree seedlings. See the "county government" section of your telephone directory.

● *Soil Conservation Service (SCS)* offices, in cooperation with local conservation districts, provide technical help to cooperating landowners. SCS technicians can prepare a conservation plan, including information on soils and other resources, that will help you identify marginal lands and decide where to plant trees. See "Department of Agriculture" in the "U.S. Government" section of your telephone directory.

● *Agricultural Stabilization and Conservation Service (ASCS)* offers cost-share assistance programs under the Agricultural Conservation Program and the Forestry Incentives Program. You may receive up to 75 percent of the cost of tree planting. Benefits vary from state to state; some use a dollar limit. See "Department of Agriculture" in the "U.S. Government" section of your telephone directory.

● *Industrial foresters* work with landowners who are interested in cooperative forest management agreements. These agreements offer you professional forest management counsel, management plans, possible markets for timber, and often free seedlings. The companies, in return, may request first-refusal rights on timber sales. Contact your county Extension agent or county forester for a list of industrial firms offering such programs.

● *Consulting foresters* are independent professionals who provide technical assistance for a fee. They often provide tree planting and other forest management services to private landowners. Absentee landowners may find a consulting forester the best source of assistance. See the "forestry consultants" section in the yellow pages of your telephone directory, or ask your county Extension agent or county forester for a list of consultants who operate in your area.

This brochure is based on a publication prepared by the U.S. Department of Agriculture's Office of Budget and Program Analysis:
Conversion of Southern Cropland to Southern Pine Tree Plantings: Conversion for Conservation Feasibility Study, December 1983.

